

# THE U.S. ARMY FIRE FIGHTING TRAINING SYSTEMS PROGRAM

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## Introduction

In February 1997, the U.S. Army Simulation, Training and Instrumentation Command and the Office of the Project Manager for Training Devices (STRICOM/PM, TRADE) awarded its first-ever contract for a commercially available training system using commercial practices as defined in the Federal Acquisition Regulation (FAR). Procurement of these systems was the result of the U.S. Army's Fire Fighting Training Systems (FFTS) Program, which was used to meet a congressional mandate to field FFTS at 19 initial U.S. Army installations worldwide. Fielding of FFTS began in September 1997 with funding provided by Congress in FY96, FY98, and FY99, and has been completed at 17 of the 19 initial U.S. Army installations. Because of the success of this FFTS Program, five additional U.S. Army installations were added to the initial Basis-of-Issue Plan in February 2000.

FFTS are state-of-the-art training systems that safely replicate flames, heat, and reduced visibility (using smoke obscuration) during residential or aviation firefighting training scenarios. They integrate proven, commercially available firefighting training technology into structural (mobile and modular/fixed) or aircraft rescue and fire fighting (ARFF) training systems. The modular/fixed structural firefighting training system is a three-

story, propane gas-fueled trainer with four burn rooms. The mobile structural firefighting training system is a transportable, self-contained (with built-in propane gas and electrical power sources), two-floor version of the modular/fixed structural firefighting training system. The ARFF trainer is a transportable, self-contained, aircraft mockup (42 feet by 8 feet) with a cockpit fire and exterior, rectangular fuel-spill fire simulation.

## Background

Prior to procurement of the new systems, the U.S. Army was training DOD civilian and military firefighters using fossil-fueled techniques that

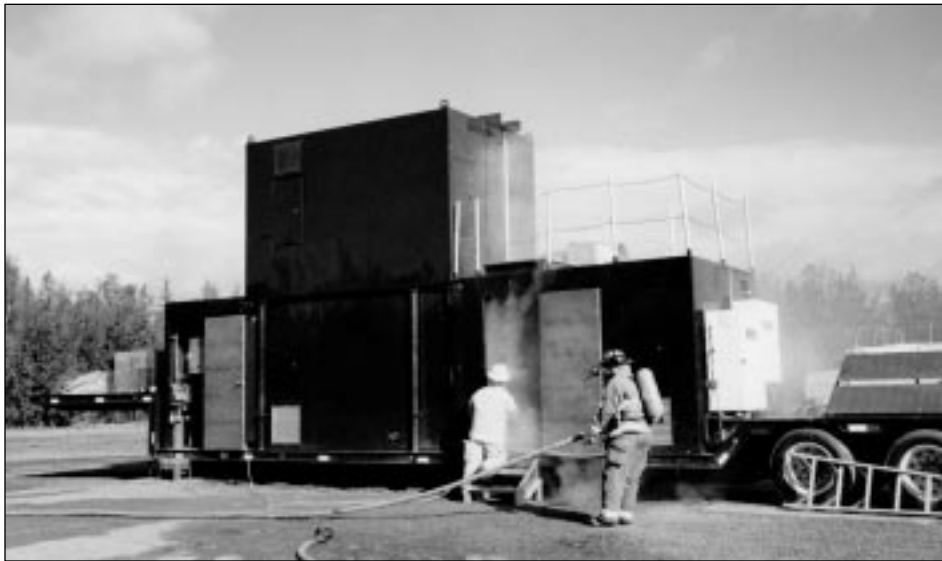
were hazardous to trainees, not easily controlled or repeated, and in some cases in violation of local environmental regulations. In 1996, Congress mandated that existing fossil-fueled firefighting training be replaced with commercially available, propane gas-fueled, computerized/programmable, logic-controlled firefighting training systems.

## Approach

From program inception, STRICOM and PM, TRADE established an empowered integrated product team (IPT) to aggressively work with the users and proponent in developing an Operational



*The modular/fixed structural firefighting training system*



*The mobile structural firefighting training system*

Requirements Document (ORD) based on market research. The IPT was also instructed to implement acquisition reform initiatives and streamline to the fullest.

Ultimately, Cost as an Independent Variable techniques were used to finalize the ORD. Market research provided insight to product characteristics, costs, and other customers, which contributed significantly to timely proposal evaluations during source selection. The market research also allowed STRICOM and PM, TRADE to reduce the procurement schedule from an anticipated 12 months to 8 months. Additionally, the IPT streamlined the solicitation, limiting the entire Request for Proposal (RFP) to 17 pages. The RFP contained no reporting requirements and the Statement of Work and Specification combined were only seven pages long.

The contract was structured to allow the government maximum flexibility in exercising its options. Unlike prior contracts in which options were tied to 12-month periods or fiscal years, the FFTS IPT structured its options in a "4-year" period that allowed the government wide latitude in acquiring additional systems as funds became available. *The Commerce Business Daily* announcement

release, the RFP release, and responses to offerors' comments were accomplished by the IPT via online communication.

### **The Team**

The FFTS IPT demonstrated the highest degree of teamwork, striving to reduce life-cycle costs. Further, the team consolidated trips and used teleconferences to reduce travel expenses in an effort to maximize the procurement of FFTS hardware. This IPT was

fully empowered from its inception in accordance with the guidance contained in AMC-P 70-27, *Guidance for Integrated Product and Process Management*. All IPT members actively contributed to the decisionmaking process.

The team completed just-in-time training at key program intervals including requirements definition, solicitation development, and source selection, which significantly contributed to an environment of openness and goal-oriented success. Fire chiefs from each military installation (i.e., users) are active members of the IPT and are considered partners when systems are fielded at their installations. Through an overarching integrated product team, midlevel STRICOM managers mentored the team throughout the solicitation development and source-selection process. In summary, this team is empowered to fully implement acquisition reform efforts.

### **Outcome**

Source selection was completed in record time, with contract awards issued only 15 weeks after release of the solicitation. The FFTS contract was awarded as a competitive, best-value effort fully using the commercial practices defined in Part 12 of the FAR.



*The ARFF training system*



*The ARFF in use by the Fort Wainwright, AK, fire department*

The first modular/fixed structural firefighting training system was fielded at Fort Monmouth, NJ, on Oct. 30, 1997. The first ARFF training system was fielded at Fort Belvoir, VA, on March 6, 1998. The first mobile structural firefighting training system was fielded at Fort Lewis, WA, on June 26, 1998.

The benefits derived from this particular acquisition approach are as follows:

- The per-unit firefighting training system price was lower than the price quoted during the market research. This facilitated the purchase of more units during the initial buy than originally envisioned.
- The life-cycle cost of ownership of the firefighting training system units was kept low by requiring the use of commercially available, industry-proven technology. A comprehensive commercial 1-year warranty along with a 15-year service-life warranty for major structural components (as validated by the market research) were also part of the proposal requirements. As a result, the winning offeror's firefighting training system units have been very reliable, and the cost of ownership has been negligible.
- Close coordination with the users has assured that facility considerations are common for each fire-

fighting training system site. This has ensured the lowest possible setup and maintenance costs for each installation by sharing site preparation design drawings and information among all users.

- Ninety-five percent of the procured FFTS have been delivered on or ahead of schedule because of the close government/contractor partnership.
- Commercial documentation (operator and maintenance manuals) is updated regularly at no additional cost to the government.
- Failed electronic/fire-generation controls are replaced with more efficient components at no additional cost to the government.

The unique and innovative contractor/government partnership taken by the IPT also resulted in several trainer improvements without an increase to the trainer unit prices, as would be the case with traditional engineering change proposals. For example:

- The mobile trainers were given an added capability to connect to permanent/fixed propane and electrical supplies.
- A three-story modular/fixed structural trainer replaced a two-story trainer specified in the contract.

## Conclusion

The U.S. Army FFTS Program represents the success that can be achieved through partnering aggressively, streamlining acquisitions, and implementing acquisition reform initiatives. Not only did the government acquire the required trainers at a cost lower than any other civilian or government customer, but the capabilities and training features of the trainer are improved continuously (based on lessons learned throughout the production and fielding phases) at no additional cost to the government. The FFTS Program is also an example of the time and cost savings achieved when acquisition reform and streamlining initiatives are implemented throughout the acquisition process.

Visit STRICOM's Web site at <http://www.stricom.army.mil/PRODUCTS/FFTS/> for more information on the FFTS and other programs.

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